POWERMIX 6/3 digital
USER MANUAL

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ITEC
www.itec-audio.com

This manual describes the hardware des „ITEC-POWER 6/3 digital“.
The user could found all operating instructions for the already installed and configured device.

A technician finds the necessary data for the electrical connection of all inputs and outputs as well as important safety-relevant references in this manual.

For start-up and configuring the equipment as well as to understand the function and the various possibilities additionally the

ITEC POWERDESIGN manual

is essential. **ITEC POWERDESIGN** is a PC Software to configure and control the „ITEC-POWER 6/3 digital“. The technician can easily configure the device as requested and implement a wide variety of sound effects without using additional devices.

You will always find the latest version of **ITEC POWERDESIGN** including the **ITEC POWERDESIGN manual** for a free of charge download under:

http://itec-audio.com/download/powerdesign/powerdesignsetup.exe

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Dear customer!

For over 20 years ITEC audio engineering stands for perfect sound quality and simplest operation. ITEC amplifiers offer all necessary features to the technician to ensure an optimum adjustment to the acoustic conditions. On the other hand they are well understandably and simple to serve for the user.

High-end digital audio technology is usually reserved to professional recording and broadcasting studios. With the new „ITEC POWERMIX 6/3 digital“ we are integrating it into a mobile device, multiplying quality, performance and possibilities of application. Simultaneously, handling is kept very simple and in fact layman-proof.

We can ensure you that you have made the right decision in acquiring the „ITEC POWERMIX 6/3 digital“. You now own a product representing state-of-the-art technology and usability with a functional design and a variety of features making daily operation a delight.

We hope you will enjoy using your new device. Needless to say, we are happy to take all your questions concerning audio engineering, lecturing technique, media remote control, seminar room equipment, etc.

Your **ITEC** acoustic-team

Safety Instructions

Please read the operating instructions attentively before turning on the „ITEC-POWERMIX 6/3 digital“.

You must use a grounded plug socket (PROTECTED PLUG) when charging or operating the device!

Storing the device in humid conditions, operating it in pouring rain or near splashing water could cause damage. Avoid exposing the device to temperatures above 50°C or humidity above 95%.

Avoid temperatures below –10° when operating and temperatures below +5° when storing devices with integrated battery packs (see also chapter 7).

Do not place other devices or objects on the housing of the "ITEC POWERMIX 6/3".

Do not try to open the device. No serviceable parts inside. In case of any damage or problems always contact your dealer or the manufacturer.

The device can be connected to a PC via the serial interface for configuration purposes. This should be done by trained sound engineers only.

Attention: Unplug an installed battery pack any time the device is opened by an expert and then unplug the power supply.

Unplug the power cord before any maintenance or cleaning procedure.
The display should be cleaned gently using a dry cloth.

2. POWERMIX 6/3 digital: Front panel

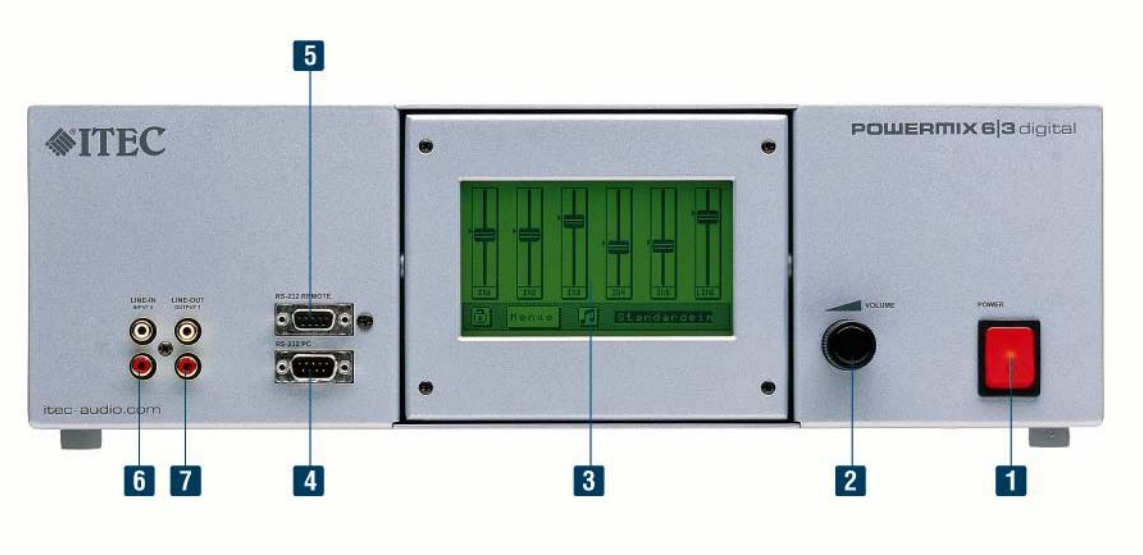

Fig. 1 POWERMIX Front panel

1. Main switch: Used to turn On/Off the device
(additional devices connected to the “AC-OUT” connector are also turned on/off). Devices with an integrated battery pack should be switched on/off by pressing the Master volume button. Therefore the Main switch must be always turned on to guarantee battery loading.

2. „Master-Volume“ Control: Used to control the volume of all input channels which are configured as “controlled” inputs in „PowerDesign“.
Further functions:
- Hardware-Reset: Press the control button at least for 10 seconds.
- devices with integrated battery: Turn On/Off the device by press the control button

3. Display with touch screen, 3 snap in positions to warrantee legibility in each possible installation location.

The following elements are arranged on the rear panel if you have a device labeled with „i“

4. RS-232 Interface: Used to connect a PC via serial interface
(see ITEC POWERDESGN Manual)

5. RS-232 Interface Remote: for remote control.
(Attention: This isn’t a standardized RS232 connector, use only original accessories)

6. „LINE-IN“- connector: corresponds to input channel no. 6
Stereo-Cinch-connector (intern processed as mono channel !) to plug in external audio devices e.g. CD-player, MP3-player etc.

7. „LINE-OUT“-connector: corresponds to output channel „OUTPUT 1“
Stereo-Cinch-connector (mono signal) to plug in recording devices.

3. POWERMIX 6/3 digital: Rear panel

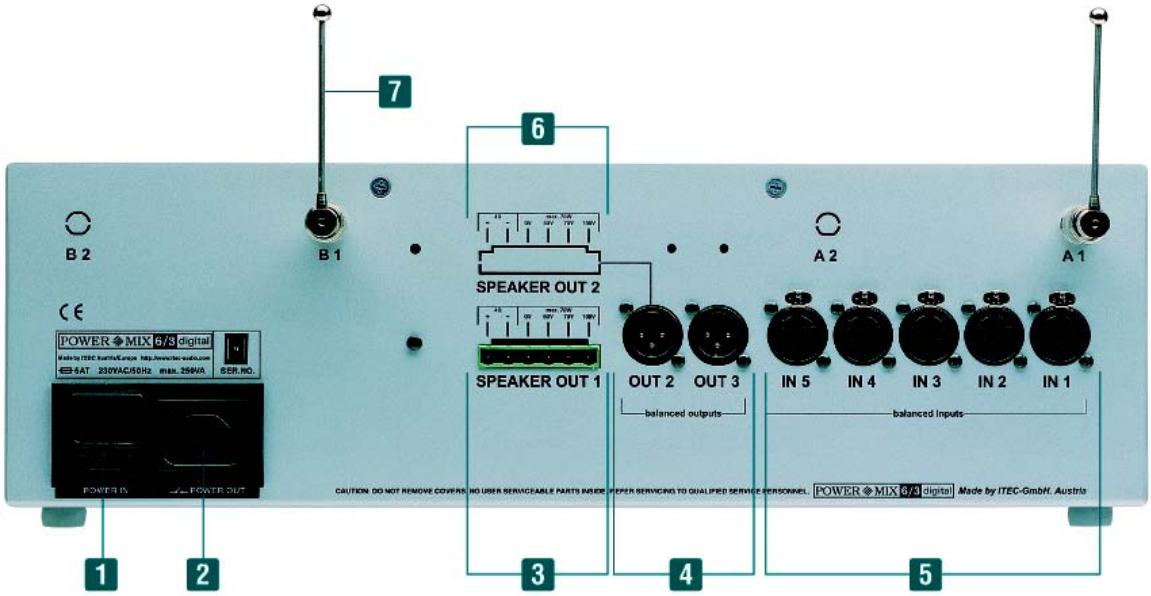

Fig 2 POWERMIX Rear panel

1. Power supply AC-IN

Use the supplied power cord to plug into 230 VAC power.
Fuse: Glass tube fuse 5x20mm, 5A slow-blow.

2. AC-OUT

Switched power supply voltage to connect external devices as for instance Pre-Amplifiers, radio transmitters or any other devices with low power consumption.
Attention: Don't connect power amplifiers via this connector.

3. Loudspeaker connector „SPEAKER OUT 1"

Used to connect low impedance or 100V Loudspeakers.

Maximal power consumption of connected 100 Volt Speakers: 75 Watt
Minimal resistance for low impedance speakers: 4 Ohm

4. XLR-output connectors

OUT2 - OUT3: balanced Line-outputs.

Pin assignment: 1…….ground
2……...signal+
3..... signal –

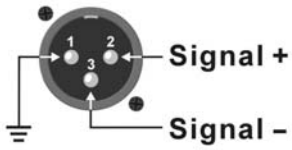

Fig. 3 output connector

If you need to connect the balanced out to an unbalanced input (e.g. phone jack input), use **ground** and **signal+**. Pin 3, don't connect **Signal-**

5. XLR-input connectors

IN1 - IN2: balanced Microphone inputs, 12V Phantom power
IN3 - IN5: balanced inputs, optional Line/Mic.,
switchable 12V phantom power

Pin assignment: 1…….ground
2……...signal+
3..... signal –

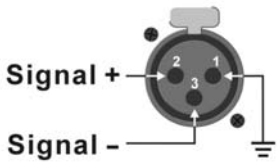

Fig. 4 input connector

If you need to connect an unbalanced input, use **ground** and **signal+**. Connect **signal-** with **ground** !

6. Loudspeaker connector „SPEAKER OUT 2“ (optional)

This connector could be used if the optional component „ITEC POWER BOOST 2“ is installed. Pin assignment and features are equal to „SPEAKER OUT 1“ (see item no. 3).

7. Antenna connector (optional)

This connector is available if the optional component „radio frequency receiver” is installed!
BNC-jack to directly connect an antenna or a coaxial aerial line.
For each installed receiver there are 2 jacks installed.
Use the supplied antennas or order special ground-plane antennas with corresponding cables.

Hint: If you use devices with a “i“-label, the “LINE-IN”, “LINE-OUT” and RS232 connectors are arranged on the rear panel (described in section 2).

4. Operation instructions

Important notice: „ITEC POWERMIX 6/3 digital“ is a universal device. Features are configured with the PC Software “ITEC_POWERDESIGN” before start-up.
Therefore the following figures are examples of a configuration.
Each device has its individual configuration and the display views and features of your device can differ from the described ones.

Power on the device: Bring Main switch in position “ I “.
On devices with integrated battery pack press the „Master-Volume“-button.

After switching on the device the following screen appears on the display:

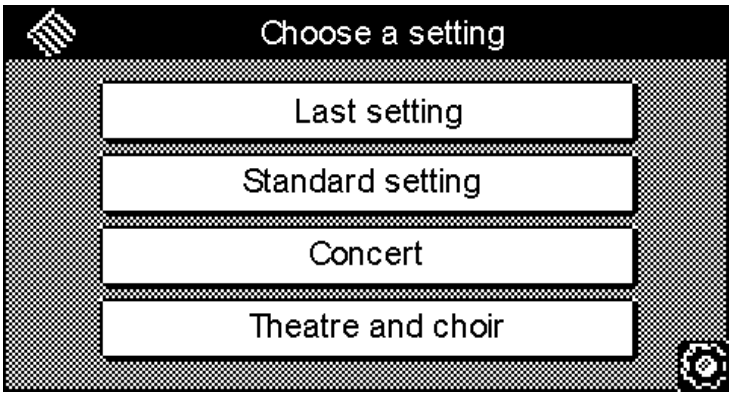

Fig. 5 Example of a selection menu

If you want to work with the setting, which was used last, then press ”Last setting”. That is the correct selection, if your device were already configured well before switching off or an interruption.
The second menu entry is the configuration “Standard setting” (Name could be modified). This is mostly the Default configuration which guarantee a well prepared operation.
This setting is usually a good starting position for your individual volume tuning.
After this two menu entries there are up to three further entries to select other configurations. Keep the used configuration names as characteristically as possible for your type of scenario.

Depending on your configuration, the device

- ◯ waits for an user input
- ◯ starts after ☐ seconds with configuration:

  ☐ „Last setting“

  ☐ .....

4.1 Main view

Independent from your chosen configuration, the display shows a virtual mixer with sliders for each input channel

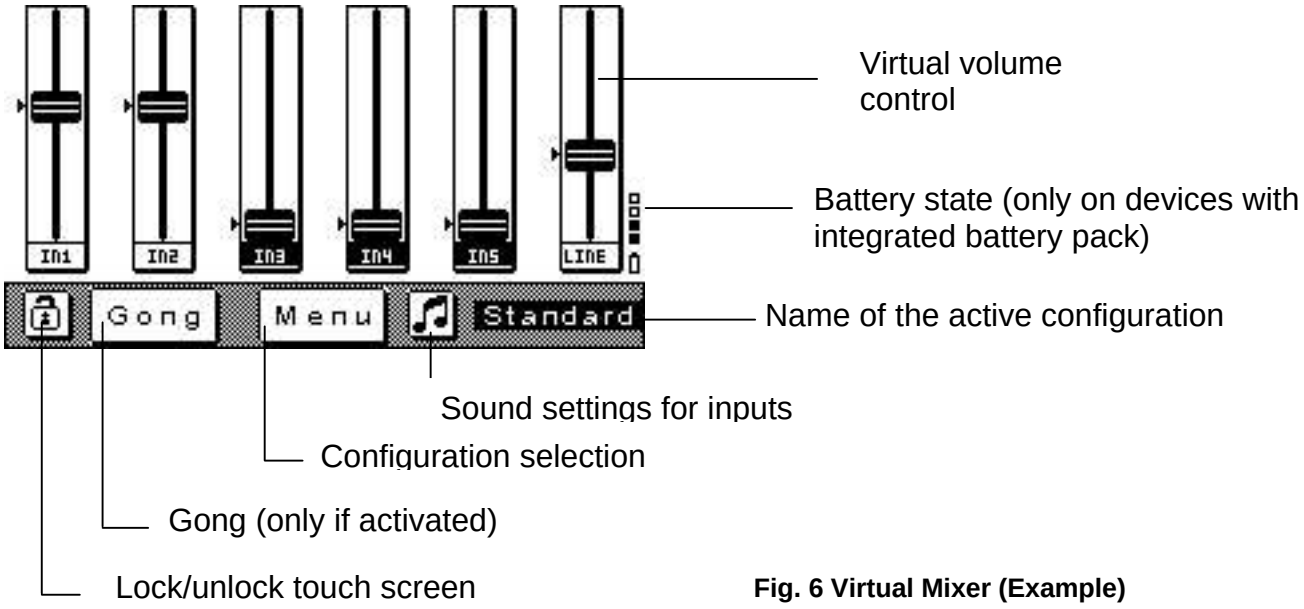

Fig. 6 Virtual Mixer (Example)

Number and labeling of visible sliders is individual configurable.
Following label names are defined for your device:

1..... 2..... 3..... 4..... 5..... 6.....

4.2 Individual volume adjustment

The sliders on the display could be used for adjust the volume of the corresponding input channels. There are the following possibilities to do this:

- Move your finger on the slider button and drag this into the desired position. (Dragging upwards increases the volume)
- Tip with your finger above or underneath the slider button.

4.3 Master volume control

To control the volume for a defined group of inputs (e.g. all microphones), the „Master-Volume“ control could be used.
This group depends on your individual device setting.

Following inputs of your device are controlled by the „Master-Volume“ Control:

....

Turn the controller for volume adjustment

clockwise: : turn up the sound
counterclockwise: turn down the sound

Fig. 7 Master volume control

Hint: Input channels which are muted by touch screen operation are displayed with inverted naming labels. They are not affected by the master volume control. Only a touch screen operation could release this input channel.

4.4 Start volumes

The start volumes for a specific configuration are predefined by programming a specific configuration via PC software POWERDESIGN.
On the left side of each slider there is a little arrow which marks the start volume setting. Thus the user can always see the start volume of the active configuration.

In some cases it could be necessary to modify this start volumes without a connected PC. In the system menu of the device (see section 5.2) there is the entry “Save Config” which allows to save the actual configuration permanent into the device.

Following approach is necessary to save the actual configuration settings:

- Choose the configuration to be modified (e.g. „Standard“).
- adjust the desired volume levels.
- Press the “Menu” button and press the symbol. Chose „System“ / „Save Config“.
- To avoid an unauthorized or unintentionally access you have to input a security code.

The code for your device is: [ ]

After correct input of the security code you can hear a beep. The modified configuration is successfully saved and your device will start with this settings.

5. Additional Settings and Indicators

As mentioned, the „ITEC POWERMIX 6/3 digital“ device can be programmed and configured in many ways using the software “Powerdesign” and a PC. Some important parameters can also be modified directly at the device.

To enter the menu for additional settings, press the button labeled “Menu” and then the button showing a gearwheel on the lower right of the display.

A sub-menu appears, offering the following menu items:

5.1 Audio

- Line-In tone-controls
- Input levels display
- Output levels display

5.2 System

- Display adjustments: Contrast and time before light dims automatically
- Status of the rechargeable battery: Voltage and remaining capacity
- Remote control: Selection of the remote control that is used
- Save Config (see section 4.4)

5.3 Info

Displays device information and project relevant information.

6. Connecting to External Devices

6.1 Playback

MC cassette decks, CD players, MP3 players etc, can be connected to the “Line-In” sockets at the connection panel (see also the figure in chapter 6).

The volume adjustment is done via the fader labeled “LINE” on the display in mixer mode.

For bass and treble adjustments, press the note symbol (lower left of the display) and then tap on the modifier buttons.

The tone control only affects the Line input, all other inputs (like microphones) remain unchanged as they are optimized at the factory. Changing sound settings on microphone inputs is possible using the software “Powerdesign” and a PC.

6.2 Recording

Connect your recording device to the Line-Out socket at the front panel. All of the inputs will be mixed according to the adjusted volume settings and sent to this output socket.

On devices labeled with „ i “ this socket are on the rear panel.

6.3 Connecting PA-systems

Connect external P.A. systems using a standard XLR cable to the socket labeled “OUT 2” or “OUT 3” (balanced line-level output).

The signals on this outputs depends on the configured routing and EQ settings.
This settings are defined during the installation of the device by the audio engineer.

7. The rechargeable battery (optional)

If your device is equipped with a rechargeable battery enabling 6 hours of operation independent from external power sources.

Charging the battery
The lectern must be turned off while charging. The rechargeable battery will not be charged if the lectern is turned on.

Connect the power cord with the source socket. The built-in automatic charging-device ensures correct charging voltage. You can leave the device plugged, overcharging is not possible.

Fully charged battery allows for an operation time of about 6 hours.

During charging, the display shows the charging current. If the battery is empty the current will be around 2500mA. After some time, the current will go down to 100-300mA depending on ambient temperature and age of the battery.
If the battery is fully charged the display will show “Battery is charged”.

Battery status and discharging protection

The battery status indicator is located at the lower right of the display. 4 marks indicate full capacity. 3, 2 and 1 marks indicate that 75, 50 and 25% capacity remains.

The lectern will power down automatically if battery capacity is low in order to protect the rechargeable battery from damage. A warning message will be displayed a few minutes beforehand, suggesting to connect the lectern to external power.

Rechargeable Battery Maintenance

The rechargeable battery is sealed and maintenance free. In order to achieve a long battery lifetime please follow some simple rules:

Charge the battery before the first and after each time the lectern is operated.

You may keep the lectern connected to the power line all year, the automatic charging device will prevent overcharging.

Do not store the lectern with an uncharged battery!

Avoid temperatures below +5°C when storing the lectern!

8. **Wireless Microphones** (optional accessory)

8.1 How to use

Turn on the wireless microphone.

Adjust the volume using the fader “WM-1” (WM-2, WM-3) on the display in mixer mode.

Check if the microphone works everywhere where it will be used during the lecture or presentation.

Be sure to check if the batteries are OK / charged.

Do not forget to switch off the microphone(s) when not in use. Battery lifetime is limited to about 6 hours or less, depending on the microphone model supplied. When using rechargeable batteries, this time may be even shorter.

If a wireless microphone is not in use, consider setting the fader „WM…“ to zero to avoid possible RF distortions.

Notice:	Each lectern “Success” can be equipped with up to 3 wireless receivers for the use with wireless microphones. Upgrades can be done easily. Ask your dealer for further details.

8.2 Exchanging Batteries

CAUTION: Batteries are hazardous waste. Old batteries have to be disposed of properly.

ITEC WM-716 - hand held microphone
(also WM 816 and WM 702)
Slide battery lid open, remove top battery and then pull the white plastic strip to remove the other two batteries from the battery compartment. Insert 3 new batteries!
Mind the poles (+ is at the bottom)!
Battery type: 3 pcs Mignon „AA“ 1.5 V
Batteries are okay: green LED is on
Batteries are low: red LED is on

ITEC WT-716 - button microphone
(also WT 816 and WT 702)
Open lid at the bottom of the casing and exchange all three batteries.
Mind the poles !
Battery type: 3 pcs Mignon „AA“ 1.5 V
Batteries are okay: red LED blinking
Batterie are low: red LED permanently on

ITEC WM-5100 - hand held microphone
Unscrew lid at the bottom end of the microphone and insert two new batteries. Mind the poles (+ is at the bottom)!
Battery type: 2 pcs Mignon „AA“ 1.5V
Batteries are okay: red LED blinking
Batterie are low: red LED permanently on
The status of the battery is also shown on the LCD-display.

ITEC WT-5100 - button microphone
Open lid at the bottom of the casing and exchange both batteries.
Mind the poles!
Battery type: 2 pcs Mignon „AA“ 1.5V
Batteries are okay: red LED blinking
Batterie are low: red LED permanently on
The status of the battery is also shown on the LCD-display.

Specifications

GENERAL	
Power Supply	110 – 230 V, 50/60 Hz
Maximum power consumption	250 Watt
Dimensions (without mounting brackets)	432 x 132 x 266 (WxHxD)
Dimensions with 19“ mounting brackets	432 x 132 x 266 (WxHxD) **19”, 3 HE**
Weight	ca. 6,25 kg
Lacquer	silver (version “i“: black)
INPUTS	
Input 1-2 (XLR)	Microphone input, Gain 10dB to 50dB Phantom power 12 Volt
Input 3-5 (XLR)	Line/Mic Input, Gain –20dB to 250dB Phantom power 12 Volt, switchable
Input 6 (Cinch)	Line-Input Gain –20dB to 20dB
OUTPUTS	
Output 1 (Cinch)	unbalanced Line-Out
Output 2-3 (XLR)	balanced Line-Out
SPEAKER OUTPUT	
Output power	75 Watt RMS (2x75W optional)
Low impedance connector	Min. 4 Ohm
Output transformer	50/70/100 Volt, 75 Watt max.
INTERFACES	
RS 232 PC	Configuration via PC (PowerDesign)
RS 232 Remote	Remote control interface
SPECIAL AUDIO FEATURES	
Four programmable configurations	
Automatic microphone switcher/mixer	
Flexible signal routing	
VIRTUAL MIXER ON TOUCH SCREEN	
Up to 6 Volume sliders	
Bass and treble control	
DSP (DIGITAL SIGNAL PROCESSING), PC PROGRAMMABLE	
5 Input equalizer- 4-Band parametric	
3 Output equalizer- 12-Band parametric	
Compressor / Limiter	
OPTIONS	
Radio receiver (up to 2 units could be integrated)	Diversity receiver UHF or VHF
Rechargeable battery (incl. Loading circuit)	12 Volt 7,2 Ah, Operation time ca. 8h
2nd Power Amp. **„ITEC Power-Boost 2“**	75 Watt, 50/70/100 Volt bzw. 4 Ohm

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